

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5 (Canceled).

6. (Previously presented) In a disaster recovery environment including a primary file server at an active site and a secondary virtual file server at a disaster recovery site remote from the active site, the secondary virtual file server including a collection of files being replicated from the primary file server to the disaster recovery site, the secondary virtual file server needing resources including network interfaces and file system mounts at the disaster recovery site for providing user access at the disaster recovery site, a method comprising:

- a) determining whether there are sufficient network interfaces and file system mounts at the disaster recovery site for the secondary virtual file server for providing user access at the disaster recovery site; and
- b) upon finding that there are sufficient network interfaces and file system mounts at the disaster recovery site for the secondary virtual file server for providing user access at the disaster recovery site, reserving the network interfaces and file system mounts that are needed at the disaster recovery site for providing user access at the disaster recovery site;

wherein a primary copy of user mappings is kept at the disaster recovery site, and a read-only cache of the user mappings is kept at the active site.

Claims 7-10 (Canceled).

11. (Original) In a disaster recovery environment including a primary file server at an active site and a secondary virtual file server at a disaster recovery site remote from the active site, the secondary virtual file server including a collection of files being replicated from the primary file server to the disaster recovery site, the secondary virtual file server needing resources including network interfaces and file system mounts at the disaster recovery site for providing user access at the disaster recovery site, a method comprising:

a) determining whether there are sufficient network interfaces and file system mounts at the disaster recovery site for the virtual secondary file server for providing unrestricted user access at the disaster recovery site once a configuration change would be made to the primary file server; and

b) upon finding that there are insufficient network interfaces and file system mounts at the disaster recovery site for the virtual secondary file server for providing unrestricted user access at the disaster recovery site once the configuration change would be made to the primary file server, providing an operator with a list of missing resources or discrepancies, and receiving from the operator a choice of termination or configuration change; and

c) upon receiving from the operator a choice of configuration change, reserving network interfaces and file system mounts that are available and needed at the disaster recovery site for

providing user access at the disaster recovery site once the configuration change would be made to the primary file server; and then

- d) performing the configuration change to the primary file server.

12. (Original) In a disaster recovery environment including a primary file server at an active site and a secondary virtual file server at a disaster recovery site remote from the active site, the secondary virtual file server including a collection of files being replicated from the primary file server to the disaster recovery site, the secondary virtual file server needing resources including network interfaces and file system mounts at the disaster recovery site for providing user access at the disaster recovery site, a method comprising:

- a) determining whether there are sufficient network interfaces and file system mounts at the disaster recovery site for the virtual secondary file server for providing unrestricted user access at the disaster recovery site; and
- b) upon finding that there are insufficient network interfaces and file system mounts at the disaster recovery site for the virtual secondary file server for providing unrestricted user access at the disaster recovery site, providing an operator with a list of missing resources or discrepancies, and receiving from the operator a choice of termination or forced failover; and
- c) upon receiving from the operator a choice of forced failover, reserving network interfaces and file system mounts that are available and needed at the disaster recovery site for providing user access at the disaster recovery site; and then
- d) performing failover of user access from the active site to the disaster recovery site.

13. (Original) In a disaster recovery environment including a primary file server at an active site and a secondary virtual file server at a disaster recovery site remote from the active site, the secondary virtual file server including a collection of files being replicated from the primary file server to the disaster recovery site, a method comprising:

maintaining a primary copy of user mappings at the disaster recovery site and a read-only cache of the user mappings at the active site during user file access at the active site; and

upon failover of user access from the primary file server at the active site to the virtual secondary server at the disaster recovery site, accessing the primary copy of user mappings at the disaster recovery site in order to continue user file access at the disaster recovery site.

14. (Original) The method as claimed in claim 13, wherein user session information is kept at the disaster recovery site so that users accessing files of the primary file server at the active site may continue to access copies of the files at the disaster recovery site without a need to log onto the disaster recovery site upon failover of user access from the active site to the disaster recovery site.

Claims 15-25 (Canceled).

26. (Previously presented) A disaster recovery system comprising:

a primary file server at an active site; and

a secondary virtual file server at a disaster recovery site remote from the active site, the secondary virtual file server including a collection of files that have been replicated from the

primary file server to the disaster recovery site, the secondary virtual file server needing resources including network interfaces and file system mounts at the disaster recovery site for providing user access at the disaster recovery site,

wherein the disaster recovery system is programmed for responding to a request from a system administrator by:

- a) determining whether there are sufficient network interfaces and file system mounts at the disaster recovery site for the secondary virtual file server for providing user access at the disaster recovery site; and
- b) upon finding that there are sufficient network interfaces and file system mounts at the disaster recovery site for the secondary virtual file server for providing user access at the disaster recovery site, reserving the network interfaces and file system mounts that are needed at the disaster recovery site for providing user access at the disaster recovery site;

and which includes storage at the disaster recovery site containing a primary copy of user mappings, and which includes a read-only cache of the user mappings at the active site.

Claims 27-30 (Canceled).

31. (Original) A disaster recovery system comprising:

a primary file server at an active site; and
a secondary virtual file server at a disaster recovery site remote from the active site, the secondary virtual file server including a collection of files that have been replicated from the primary file server to the disaster recovery site, the secondary virtual file server needing

resources including network interfaces and file system mounts at the disaster recovery site for providing user access at the disaster recovery site,

wherein the disaster recovery system is programmed for responding to a configuration change request from a system administrator by:

- a) determining whether there are sufficient network interfaces and file system mounts at the disaster recovery site for the virtual secondary file server for providing unrestricted user access at the disaster recovery site once a configuration change would be made to the primary file server; and
- b) upon finding that there are insufficient network interfaces and file system mounts at the disaster recovery site for the virtual secondary file server for providing unrestricted user access at the disaster recovery site once the configuration change would be made to the primary file server, providing the system administrator with a list of missing resources or discrepancies, and receiving from the operator a choice of termination or configuration change; and
- c) upon receiving from the operator a choice of configuration change, reserving network interfaces and file system mounts that are available and needed at the disaster recovery site for providing user access at the disaster recovery site once the configuration change would be made to the primary file server; and then
- d) performing the configuration change to the primary file server.

32. (Original) A disaster recovery system comprising:
a primary file server at an active site; and

a secondary virtual file server at a disaster recovery site remote from the active site, the secondary virtual file server including a collection of files that have been replicated from the primary file server to the disaster recovery site, the secondary virtual file server needing resources including network interfaces and file system mounts at the disaster recovery site for providing user access at the disaster recovery site,

wherein the disaster recovery system is programmed for responding to a failover request from a system administrator by:

- a) determining whether there are sufficient network interfaces and file system mounts at the disaster recovery site for the virtual secondary file server for providing unrestricted user access at the disaster recovery site; and
- b) upon finding that there are insufficient network interfaces and file system mounts at the disaster recovery site for the virtual secondary file server for providing unrestricted user access at the disaster recovery site, providing the system administrator with a list of missing resources or discrepancies, and receiving from the operator a choice of termination or forced failover; and
- c) upon receiving from the operator a choice of forced failover, reserving network interfaces and file system mounts that are available and needed at the disaster recovery site for providing user access at the disaster recovery site; and then
- d) performing failover of user access from the active site to the disaster recovery site.

33. (Original) A disaster recovery system comprising:

a primary file server at an active site; and

a secondary virtual file server at a disaster recovery site remote from the active site, the secondary virtual file server including a collection of files being replicated from the primary file server to the disaster recovery site;

wherein the disaster recovery system is programmed for:

maintaining a primary copy of user mappings at the disaster recovery site and a read-only cache of the user mappings at the active site during user file access at the active site; and

upon failover of user access from the primary file server at the active site to the virtual secondary server at the disaster recovery site, for accessing the primary copy of user mappings at the disaster recovery site in order to continue user file access at the disaster recovery site.

Claims 34-43 (Canceled).